

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

JAMES T. CLAY AND TIMOTHY J. CLAY,

Plaintiffs,

vs.

PHILLIP MORRIS CORPORATION, THE
TOBACCO INSTITUTE, AND DOES 1
through 100, inclusive,

Defendants.

No. C 81 3096 WWS

AFFIDAVIT OF
GIO B. GORI

Gio B. Gori, Dr.Sc., MPH, being duly sworn, upon his oath,
deposes and says that:

1. I am GIO B. GORI, Dr.Sc., MPH, Vice President of the Franklin Institute Research Center, Washington and Philadelphia. Until May, 1980, I was Deputy Director of the Division of the Cancer Cause and Prevention at the National Cancer Institute in the Department of Health and Human Services (formerly a part of the Department of Health, Education and Welfare). Attached to this affidavit is a true and accurate copy of my most recent curriculum vitae. I am a Diplomate of the Academy of Toxicological Sciences, an editor of Nutrition and Cancer, an international journal, and am continuing my interests in this field, as well as in epidemiology, toxicology, smoking and health, the environment, health economics and regulatory policy.

2. During the period from 1968 until May of 1980, when I was with the National Cancer Institute, my duties included responsibilities as organizer and director of the Smoking and Health Program of the National Institutes of Health, on account of which I received the Public Health Service Superior Service Award in 1976. In addition to maintaining a familiarity with current medical literature relating to tobacco smoking and health, my duties required that I develop and maintain expertise in agricultural techniques relating to the growth of tobacco and in the combustion characteristics of cigarettes. As shown by my curriculum vitae, I have publications in each of those areas.

3. My work for the National Cancer Institute resulted in my reviewing the literature relating to attempts to produce cigarettes which would not cause fires. It was part of my duties at N.C.I. to respond to inquiries from members of Congress concerning such cigarettes. An example of one of those responses is a copy of my

letter to Representative L. H. Fountain which is attached to his affidavit filed in this case. The statements in that letter are true and accurately reflected in my opinion at that time on the state of the art concerning self-extinguishing cigarettes. That is still my opinion, since I am aware of nothing which would cause me to change that opinion.

4. As a part of my work with N.C.I., I requested that the Naylor Dana Institute perform tests on cigarettes supplied by Mr. Charles C. Cohn. The Naylor Dana Institute for Disease Prevention in Valhalla, New York, is a research unit of the American Health Foundation and is well qualified to perform the tests required. Over a number of years, I also engaged in correspondence with Mr. Cohn and he supplied me with other test results and information concerning cigarettes he had treated with his "Colite" process. The test results established that cigarettes treated with his process would not provide an acceptable alternative design for cigarettes commercially marketed today. The test results show that cigarettes treated by his process are unacceptable for a number of reasons:

- (1) The test results supplied by Mr. Cohn established that cigarettes treated with his process rated low in consumer acceptability tests. Smokers cannot be expected to smoke a cigarette if it has an unacceptable taste:
- (2) The test results supplied by Mr. Cohn and by Naylor Dana Institute both established that in the mainstream smoke of cigarettes treated with Mr. Cohn's process, there is a substantially increased yield of smoke constituents. While this determination was made on a per-cigarette basis, the National Cancer Institute was not convinced that the cigarettes supplied by Mr. Cohn were preferable even when the results were interpolated to a per-puff analysis. The test results must be based on a per-cigarette basis because this is what the individual smokes.
- (3) The test results supplied by Mr. Cohn established the likelihood of manufacturing difficulties with his process; and
- (4) The test results supplied by Mr. Cohn established that his cigarettes did not consistently pass fire resistance tests.

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5. During the course of my work with the National Cancer Institute I had occasion to supply experimental cigarettes to Dr. John F. Krasny in connection with his work on behalf of the National Bureau of Standards. Attached to this affidavit as Exhibit "A" is a copy of a letter which I sent to Dr. Krasny providing my views on a discussion I had with him in May of 1980. The statements in that letter are true and correct. In that letter, I pointed out that combustion rates and burn temperatures of cigarettes can vary depending on the batch of tobacco used. Thus, some slight variance in ignition propensity of cigarettes could be expected even within a particular cigarette brand.

6. My review of the patent and scientific literature has not revealed the existence of any particular method for producing an acceptable cigarette which would be fire safe or self-extinguish.

7. The facts and data upon which my opinions are based are of a type reasonably relied upon by experts in my field in forming opinions upon these subjects.

8. I have personal knowledge and am competent to testify to the matters stated herein.

GIO B. GORI
GIO B. GORI

STATE OF MARYLAND)
) ss.
COUNTY OF MONTGOMERY)

Now on this thirtieth day of June, 1982, personally appeared before me GIO B. GORI, and after being duly sworn upon his oath, signed the foregoing affidavit and stated that the facts set forth in such affidavit are known to him to be true.

SUSCRIBED AND SWORN to before me this thirtieth day of June, 1982.

Ellsworth T. Olds
Notary Public

My Commission Expires:

ELLSWORTH T. OLDS
NOTARY PUBLIC STATE OF MARYLAND
My Commission Expires July 1, 1982

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Name: Gio Batta Gori

Present Address:

Franklin Institute Policy
Analysis Center
1320 Fenwick Lane
Silver Spring, MD 20910
(301) 565-4290

REDACTED

Experience:

- Background in biology, toxicology, epidemiology, and management.
- Played key roles in the successful passage through Congress of the 1970 Cancer Act and subsequent appropriations. Planned and managed research and intervention programs of national and international scope (approximately \$200 million/yr), establishing consensus priorities in cancer causation, prevention and control, and patient management.
- Exerted national leadership in carcinogenesis research, methods and priorities of carcinogen testing, epidemiology, smoking and health, nutrition, ozone depletion and ultraviolet radiation, cost and benefit analysis of prevention policies, safety and carcinogen regulation.
- Firsthand understanding of federal research and regulatory agencies, the budgetary and appropriations process, Congress and legislative operations, the diversity of motivation in private enterprise, academia, advocacy groups, and the pluralistic socioeconomic reality.
- Direct multilingual contacts with parallel issues and programs in Europe. Numerous appearances at congressional hearings. Congressional contacts and familiarity with the lay and scientific media.

Positions:

Vice President, Franklin Research Center
Director, Franklin Institute Policy Analysis Center

Currently heads a program of basic and applied studies and public information for an independent examination of health hazards and risks, of costs and benefits of regulation, and the formulation of rational policy alternatives compatible with health and safety, a sound economy, and high living standards.

Before joining FRC, held several positions at the National Cancer Institute, most recently as Deputy Director of the Division of Cancer Cause and Prevention (GS-17), with simultaneous responsibilities as Acting Associate Director, Carcinogenesis Program; Director, Diet, Nutrition and Cancer Program; Associate Scientific Director for Program, DCCP; Director, Smoking and Health Program.

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Was Director of the Biological Research Laboratory at Litton Systems, Inc. (1967-1968)

Was Head of the Virology, Immunology, and Toxicology Sections at Melpar, Inc. (1965-1967)

Was Assistant to the President for Technical Affairs, Director of Quality Control, and Director of Production at Microbiological Associates, Inc. (1962-1965)

Earlier research positions were Associate, Wistar Institute; Associate Director, Istituto Sclavo; Research Associate, Virus Research Laboratory, University of Pittsburgh; and Associate, Microbiology and Virus Department, Istituto Superiore di Sanita. Instructor, Botany Department, University of Camerino.

Education:

Doctor of Biological Sciences, Microbiology, Botany,
University of Camerino (Italy), 1956
Financial Analysis Program, Dun and Bradstreet School of
Business, 1965
Program for Senior Managers in Government, Harvard Business
School, 1977
Master of Public Health, Johns Hopkins University, 1979

Editorial Activities:

Nutrition and Cancer, An International Journal - Editor
(1978-present)
Journal of Toxicology and Environmental Health - Editorial
Board

Professional Affiliations:

The Academy of Political Science
American Association for Advancement of Science
American Men of Science
American Public Health Association
American Society for Microbiology
American Society for Parenteral and Enteral Nutrition
International Society for Risk Analysis
Society for Clinical Trials
Society for Cryobiology
Society for Industrial Microbiology
Society for Risk Assessment
Society of Toxicology
Toxicology Forum
Diplomate: The Academy of Toxicological Sciences

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HONORS

Chairman: Conference, New Techniques in Virus Production, Annual Meeting, Society for Industrial Microbiology, Burlington, Vermont, August, 1970.

Tobacco Working Group, 1970 to 1974 (NCI).

Tobacco Segment, Carcinogenesis Area, NCI, 1970 to 1974.

Liaison Subcommittee, Joint Committee on Smoking and Health (HEW, AMA, CTR, HEW Secretary Sponsor), 1971 to 1973.

Study Group for Reverse Transcriptase Antagonists (NCI), 1971-1972.

Pharmacological and Clinical Approaches in Smoking Working Group, 1971 to 1973 (NIC).

Session on Smoking and Lung Cancer, Conference on Lung Carcinoma, National Cancer Institute, Bethesda, Maryland, March, 1972.

Ultraviolet Radiation and Skin Cancer Committee (HEW-DOT), 1972 to 1974.

Dietary Factors and Cancer of the Large Bowel, Conference on Nutrition in the Causation of Cancer, American Cancer Society and the National Cancer Institute, Key Biscayne, Florida, March, 1975.

Human Health Effects Group, Biologic Assessment Program of Inadvertent Modification of the Stratosphere, Environmental Protection Agency, Washington, D.C., 1976.

Conference on Nutrition and Cancer Therapy, American Cancer Society and the National Cancer Institute, Key Biscayne, Florida, November, 1976.

Symposium on Bioassay Models and Inhalation Toxicology, Tampa, Florida, 1976.

Organizing Committee, National Conference on Nutrition and Cancer, American Cancer Society, Seattle, 1978.

Interagency Committee for Stratospheric Ozone Protection - EPA - Health Effects Group, 1979.

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Executive Secretary:

Tobacco Working Group, 1969 - 1970.
Cancer Cause and Prevention Advisory Committee, NCI, 1970 - 1974.

Smoking and Health Committee, National Cancer Advisory Board, 1973.

Diet, Nutrition and Cancer Program Advisory Committee, NCI, 1975 - 1978.

Cancer and Nutrition Scientific Review Committee, NCI, 1976 - 1978.

Diet and Cancer Scientific Review Committee, NCI, 1976 - 1978.

Carcinogenesis Scientific Advisory Committee, NCI, 1976 - 1978.

Member: Committee for the Definition of Hazardous Substances in Tobacco Smoke, National Clearinghouse for Smoking and Health, Rockville, Maryland, 1970.

Advisory Group for Pesticide Residues in Tobacco, USDA, Washington, D.C., 1971.

Organizing Committee, XI International Cancer Congress, 1971 to 1974.

Committee on Tobacco and Cancer, American Cancer Society, 1971 to present.

IARC/WHO Committee on Evaluation of Carcinogenic Risks of Chemicals to Man, 1972 to present.

Organizing Committee, III International Conference on Smoking and Health, 1973 - 1975.

Workshop on Approaches to Assess the Significance of Experimental Chemical Carcinogenesis Data for Man, Brussels, Belgium, 1973.

Molecular Control Working Group, NCI, 1973 - 1976.

Review Task Force, ARS-USDA Activities in Tobacco Research, 1973-1980.

Kentucky Tobacco and Health Research Board, Louisville, Kentucky, 1975 to present.

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Nutrition Coordinating Committee, NIH, 1975.

Task Force on Tobacco and Cancer, American Cancer Society, 1975 - 1976.

Committee on Prevention, Institute of Medicine, 1975 to 1979.

Board of Scientific Advisors, American Society for Enteral and Parenteral Nutrition, 1977 to 1979.

Organizing Committee, NIH Conference on Nutrition, 1978.

International Union Nutritional Sciences. Workshop, Committee on Nutrition and Cancer, Cambridge, England, 1980.

Task Force on the Delaney Clause, Council for Agricultural Science and Technology, Washington, D.C., 1980.

Technical Committee, Society of Toxicology 1980-81.

Invited Speaker, Selected Meetings:

Planning and Management of Research, Carlo Erba Foundation and National Tumor Institute, Milan and Rome, 1970.

Continuous Cultivation of Viruses, Istituto Superiore di Sanita, Rome, 1970.

Continuous Cultivation of Viruses, Society for Industrial Microbiology, Annual Meeting, Burlington, Vermont, 1970.

Research for a Less Hazardous Cigarette, Second International Smoking and Health Conference, London, England, 1971.

Planning and Management of Scientific Research Programs, Grants Associates Seminars, National Institutes of Health, Bethesda, Maryland, 1971.

Smoking and Lung Cancer, Conference on Carcinoma of the Lung, National Cancer Institute, Bethesda, Maryland, 1972.

Ranking of Suspicion of Hazard of Environmental Contaminants, Advisory Committee, Toxicology Information Program, National Library of Medicine, Bethesda, Maryland, 1972.

Ranking of Environmental Contaminants for Bioassay Priority, Second International Symposium on Cancer Detection Prevention, Bologna, Italy, 1973.

Search for Less Hazardous Cigarette, XI International Cancer Congress, Florence, Italy, 1974.

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Prevention of Smoking Related Disease--Seminar--Roswell Park Memorial Institute, Buffalo, New York, 1974.

Smoking Cessation Clinics, National Cancer Institute of Brazil, Rio de Janeiro, Brazil, 1975.

Tobacco Particulate Matter, Third World Conference on Smoking and Health, New York, New York, 1975.

Ranking of Environmental Contaminants for Bioassay Priority, Workshop on the Investigation of the Carcinogenic Burden by Air Pollution in Man, Hannover, Germany, 1975.

A Program for Control of Smoking Related Diseases--Seminar and Consulting--The Government of the Philippines, Manila, 1975.

Nutrition and Cancer, XI International Congress on Nutrition, Kyoto, Japan, 1975.

Dietary Factors and Cancer of the Large Bowel Conference on Nutrition in the Causation of Cancer, American Cancer Society and the National Cancer Institute, Key Biscayne, Florida, 1975.

Less Hazardous Cigarettes, 3rd International Symposium on Detection and Prevention of Cancer, New York, New York, 1976.

Diet, Nutrition and Cancer Program, Candlelighters Meeting, Washington, D.C., 1976.

Colloquium on Nutrition and Cancer, Oak Ridge National Laboratories, 1976.

Nutrition and Cancer--Seminar--Fred Hutchinson Cancer Center, Seattle, Washington, 1976.

Diet, Nutrition and Cancer, Food Research Institute, Madison, Wisconsin, 1976.

Nutrition as a Possible Cause of Cancer, Massachusetts Dietetic Association, Framingham, Massachusetts, 1976.

Cancer and Diet, American Dietetic Association, Boston, Massachusetts, 1976.

UICC Workshop on Lung Cancer, Geneva, Switzerland, 1976.

Food and Nutrition Liaison Committee Meeting, Naples, Florida, 1976.

Nutrition and Cancer Symposium, Columbia University, New York, New York, 1976.

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Nutrition and Cancer Therapy, American Cancer Society, New York, 1976.

Prevention of Smoking Related Diseases, Institute of Medicine, National Academy of Sciences, 1977.

American Dietetic Association Legislative Workshop, Washington, DC, 1977.

Diet, Nutrition and Cancer, Brookhaven National Laboratory, Upton, New York, 1977.

Nutrition and Cancer, Foundation Curie, Paris, France, 1977.

Nutrition and Cancer, 18th Annual Meeting of the American College of Nutrition, Houston, Texas, 1977.

Nutritional Variables in Perinatal Carcinogenesis, 6th Perugia Quadrennial International Conference on Cancer, Perugia, Italy, 1977.

Conference on Commonalities in Substance Abuse and Habitual Behavior, Airlie House, Warrenton, Virginia, 1977.

Conference on Ultraviolet Carcinogens, Airlie House, Warrenton, Virginia, 1977.

Reducing the Hazard and Addictive Properties of Cigarettes, Alcoholism and Drug Abuse Institute's Summer Conference, Seattle, Washington, 1977.

Nutrition and Cancer, International Conference on Cancer and Environment, Montreal, Canada, 1977.

Symposium on Smoking and Health, University of Munich, West Germany, 1977.

Symposium on Smoking and Health, UNAMSI, Milan, Italy, 1977.

Prevention Alternatives to Raising Disease Costs, American Health Foundation, New York, 1977.

Consulting Party on Less Hazardous Cigarettes, Canadian Government, Ottawa, Jan. 1978.

Advisory Symposium in Nutrition, Kellogg Foundation, Battle Creek, Michigan, April 1978.

Conference on Health Economics, Hudson Institute, Washington, May 1978.

International Symposium on the Chemical Toxicology of Foods, Milan, Italy, 1978.

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Drug Dependence Conference, Baltimore, 1978.

ACS-NCI Conference in Nutrition and Cancer, Seattle, August 1978.

Workshop on Carbon Monoxide Toxicology, Ministry of Health, Berlin, West Germany, 1978.

Governor's Conference on Nutrition, Minneapolis, Nov. 1978.

Symposium on Environmental Determinants of Cancer, New York, University, New York, Jan. 1979.

Smoking and Health Program Conference, Savannah, 1979.

Smoking and Health Conference, Celle, West Germany, April, 1979.

Nutrition and Cancer, Meeting of the American Society of Clinical Oncology, New Orleans, May, 1979.

Institute of Food Technologists Meeting, St. Louis, June 1979.

Fourth International Symposium on the Prevention and Detection of Cancer, London, England, 1980.

Nutrient Intake and Carcinogenesis, Western Maryland Nutrition Symposium for Health Care Professionals, Frostburg State College, MD. November 1980.

Environment and Cancer, Maryland Cancer Program, Pathobiology and Management of Neoplastic Diseases course, University of Maryland, Baltimore, MD. November 1980.

James M. Perelman Visiting Professor in Oncology, Akron General Medical Center, Ohio, November 1980.

Visiting Lecturer, Kellogg National Fellows, Pontiac, Michigan, November 1980.

Numerous Television and Radio Interviews on the Subjects of Cancer Prevention, Smoking and Health and Nutrition and Cancer.

Several Appearances at Congressional Hearings on Ultraviolet Radiation and Cancer, Smoking and Health and Nutrition.

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Bibliography:

- Penso, G., Ortali, V., and Gori, G.B.: Contribution to the morphological and biochemical study on halophilic bacteria. Symposium on Brines, Cambridge, England, pp.21-28, 1957.
- Lelli, G., Balducci, D., Gori, G.B.: Contribution to the morphological study of in vitro cultivated cells. (Italian). Rend. Istit. Sup. Sanita. 20: 1113-1125, 1957.
- Gori, G.B.: Automatic trypsinization of animal tissues. (Italian). Rend. Istit. Sup. Sanita. 21: 850-865, 1958.
- Frank, M. and Gori, G.B.: Automatic control of continuous biological processes through medium turbidity. (Italian). La Ricerca Scientifica. 28: 2023-2030, 1959.
- Felici, A., Balducci, D., Gori, G.B.: Annual Proceedings of the Research Activities of the Virus Department (1957). (Italian). Rend. Istit. Sup. Sanita. 22: 345-355, 1959.
- Gori, G.B.: Soil algae and their altitudinal distribution on the Sibillini Appennins. (Italian). Ph.D. Thesis, 1956. Rend. Istit. Sci. Univ. Camerino. 1: 113-125, 1960.
- Felici, A., Balducci, D., Gori, G.B.: Annual Proceedings of the Research Activities of the Virus Department (1958). (Italian). Rend. Istit. Sup. Sanita. 23: 503-514, 1960.
- Salk, J.E. and Gori, G.B.: Theoretical, experimental and practical considerations in the use of formaldehyde for the inactivation of poliovirus. Ann. N.Y. Acad. Sci. 83: 609-637, 1960.
- Balducci, D., Andreoni, G., Gori, G.B.: Cytopathic index: A new method for quantitative evaluation of tissue culture infectivity of different virus strains. J. Bacteriology 79: 379-383, 1960.
- Gori, G.B.: The Lysostat: Apparatus for the dynamic investigation and growth of virus-carrying or sterile cell populations. Ann. Sciavo, 2: 529-533, 1960.
- Gori, G.B.: Trypsinization of animal tissues for cell culture: theoretical considerations and automatic apparatus. Applied Microbiology, 12: 115-121, 1964.
- Gori, G.B., Lee, D.Y.: A method for the eradication of Mycoplasma infections in cell cultures. Proc. Soc. Exptl. Biol. Med., 117: 918-921, 1964

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Gori, G.B.: Chemostatic concentrated culture of heteroploid mammalian cell suspensions in dialyzing fermentors. I. Experimental evidence and theoretical considerations. Applied Microbiology 13: 93-98, 1965.

Gori, G.B.: The Lysostat: Single and multistage continuous cultivation of viruses in cell suspensions. Theoretical and experimental evidence. Applied Microbiology 13: 909-917, 1965.

Gori, G.B.: Medium pollution rates in cell cultures. J. Nat. Cancer Inst., 44: 275-281, 1970.

Gori, G.B.: The continuous cultivation of viruses. Developments in Industrial Microbiology 11: 20-31, 1970. American Institute of Biological Sciences, Washington, D.C.

Gori, G.B.: Research in Smoking and Health at the National Cancer Institute. J. Nat. Cancer Inst., 48: 1759-1762, 1972.

Gori, G.B.: Smoking and cancer: research in etiology and prevention at the National Cancer Institute. Cancer, 30: 1340-1343, 1972.

Tso, T.C., Gori, G.B.: Effect of tobacco characteristics on cigarette smoke composition. The Chemistry of Tobacco and Tobacco Smoke. New York, Plenum Publishing Corp., 1972, pp. 51-64.

Gargus, J.L., Gart, J.J., Kwapien, R.P. and Gori, G.B.: Replicate control values in large scale mouse dermal bioassays of tobacco smoke condensates. Toxicology and Applied Pharmacology, 25: 478, 1973.

Battista, S.P., Guerin, M.R., Gori, G.B., and Kensler, C.J.: A new system for quantitatively exposing laboratory animals by direct inhalation. Archives of Environmental Health, 27: 376-382, 1973.

Stoner, G.D., Shinkin, M.B., Kniazeff, A.J., Weisburger, J.H., Weisburger, E.K., Gori, G.B.: Test for carcinogenicity of food additives and chemotherapeutic agents by the pulmonary tumor response in strain A mice. Cancer Research, 33: 3069-3085, 1973.

Hoffmann, D., Brunnemann, K. D., Gori, G.B., and Wynder, E. L.: On the carcinogenicity of marijuana smoke. In V. C. Runeckles (ed.), Recent Advances in Phytochemistry, vol. 9. Plenum Publishing Corp., New York, 1975.

Tso, T. C., and Gori, G. B.: Leaf quality and usability - theoretical model 1, p. 258-275. In Chemical Marketing and Economics. American Chemical Society, Philadelphia, Pa., 1975.

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Tso, T.C., and Gori, G.B.: Leaf quality and usability - theoretical model 1. Beitr. Tabakforschl., vol 8, 1975.

Patel, A. R., and Gori, G.B.: Preparation and monitoring of marijuana smoke condensate samples. Bull. Narc., 27: 47, 1975.

Gori, G.B.: Artificial tobacco substitutes. J. Am. Med. Assoc., 234: 489-490, 1975.

Gori, G.B., and Peters, J.A.: Etiology and prevention of cancer. Prev. Med., 4: 239-246, 1975.

Gori, G.B.: Summary of the informal discussion of dietary factors and cancer of the large bowel. Cancer Res., 35: 3432-3436, 1975.

Gori, G.B.: The diet, nutrition, and cancer program of the NCI National Cancer Program. Cancer Res., 35: 3545-3547, 1975.

Gori, G.B. (Ed.): Proceedings of the Tobacco Smoke Inhalation Workshop on Experimental Methods in Smoking and Health Research. DHEW Publication No. (NIH) 75-906. 84 pages.

Hoffman, D., Patriankos, C., Brunnemann, K.D., and Gori, G. B.: Chromatographic determination of vinyl chloride in tobacco smoke. Anal. Chem. 48: 47-50, 1976.

Gori, G.B.: Approaches to the reduction of total particulate matter (TPM) in cigarette smoke. Proceedings/3rd World Conference on Smoking and Health - Modifying the Risk for the Smoker. DHEW Publication No. (NIH) 76-1221. 1: 451-461, 1976.

Brunnemann, K.D., Hoffmann, D., Wynder, E. L., and Gori, G. B.: The determination of tar, nicotine and carbon monoxide in cigarette smoke: a comparison of international smoking conditions. Proceedings/3rd World Conference on Smoking and Health - Modifying the Risk for the Smoker. DHEW Publication No. (NIH) 76-1221. 1: 441-449, 1976.

Tso, T.C., Gori, G.B., and Hoffmann, D.: Reduction of nicotine and tar in tobacco and cigarettes through agricultural techniques. Proceedings/3rd World Conference on Smoking and Health - Modifying the Risk for the Smoker. DHEW Publication No. (NIH) 76-1221. 1: 35-48, 1976.

Gori, G.B., Battista, S.P., Thayer, P.S., Guerin, M.R., and Lynch, C.J.: Chemistry and In Vitro Bioassay of Smoke from Experimental Filter Cigarettes. DHEW Publication No. (NIH) 76-1076. 42 pages.

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Gori, G.B. (Ed.): Report No. 1 - Toward Less Hazardous Cigarettes - The First Set of Experimental Cigarettes. DHEW Publication No. (NIH) 76-905.

Gori, G. B. (Ed.): Report No. 2 - Toward Less Hazardous Cigarettes - The Second Set of Experimental Cigarettes. DHEW Publication No. (NIH) 76-1111.

Gori, G.B.: Low risk cigarettes: a prescription. Science, 194: 1243-1246, 1976.

Scotto, J., Fears, T.R., Gori, G.B.: Measurement of Ultraviolet Radiation in the United States and Comparison with Skin Cancer Data. DHEW Publication No. (NIH) 76-1029, 1976.

Gori, G.B.: Contributor in: Lung Cancer U.I.C.C. Technical Report Series No. 25, Wynder and Hecht Eds., Geneva, 1977.

Wynder, E. L. and Gori, G.B.: Contribution of the environment to cancer incidence: an epidemiologic exercise. Journal of the National Cancer Institute, 58: 825-832, 1977.

Tso, T.C., Gori, G.B.: A novel approach in tobacco production as food source and smoke material - year 1976 to year 2000. Proc. VI Intern. Tobacco Sci. Congress. Nov. 1976, Tokyo, Japan, 81-86.

Gori, G.B. (Ed.): Report No. 3 - Toward Less Hazardous Cigarettes - The Third Set of Experimental Cigarettes. Number (BIH)77-120. GPO, Washington, D.C. 1977

Gori, G.B.: Nutrition and cancer therapy. Cancer Research, 37: 2469-2471, 1977.

Gori, G.B.: Ranking of environmental contaminants for bioassay priority. In Air Pollution and Cancer in Man. World Health Organization. International Agency for Research on Cancer. Publication 16, Lyon, 1977, pp 99-111.

Gori, G.B.: Diet and cancer. Journal of American Dietetic Association, 17: 375-379, 1977.

Gori, G.B., Richter, B.J.: The macroeconomics of disease prevention in the United States. Science, 200: 1124-1130, 1978.

Gori, G.B., Lynch, C.J.: Toward less hazardous cigarettes. JAMA, 240: 1255-1259, 1978.

Gori, G.B.: Role of diet and nutrition in cancer cause, prevention and treatment. Bull. Cancer, 65: 115-126, 1978.

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Gori, G.B.: Diet and nutrition in cancer causation. In Chemical Toxicology of Food. C.L. Galli, R. Paoletti, G. Vettorazzi, Eds. Elsevier/North-Holland Biomedical Press, 1978.

Gori, G.B.: Diet and nutrition in cancer causation. Nutrition and Cancer, 1: 507, 1978.

Gori, G.B., Ellis, R.L.: Reduction of carbon monoxide in cigarette smoke. Prev Med, 8: 358-363, 1979.

Gori, G.B.: Summary of the workshop in carbon monoxide and cardiovascular diseases. Prev Med, 8: 404-408, 1979.

Gori, G.B.: Dietary implications in the multifactorial etiology of certain human cancers. Cancer, 43: 2151, 1979.

Gori, G.B.: Low risk cigarettes, letter to the editor. Science, 204: 690-692, 1979.

Gori, G.B., Lynch, C.J.: Development of less hazardous cigarettes, letter to the editor. JAMA, 241: 2005, 1979.

Gori, G.B., Lynch, C.J.: Socially tolerable smoke, letter to the editor. JAMA, 241: 2142, 1979.

Gori, G.B., Lynch, C.J.: Toward less hazardous cigarettes, letter to the editor. JAMA, 241: 2143, 1979.

Gori, G.B.: Food as a factor in the etiology of certain human cancers. Food Technology, 33: 48-56, 1979.

Gori, G. B.: The regulation of carcinogenic hazards. Science, 208: 256-261, 1980.

Gori, Gio B.: Observed no-effect thresholds and the definition of less hazardous cigarettes. J. of Environmental Pathology and Toxicology, 3: 193-203, 1980

Miller, A.B. with the assistance of Gio B. Gori, et al: Nutrition and cancer. Prev. Med., 9: 189-196, 1980.

Hoffmann, Dietrich, T.C. Tso and Gio B. Gori: The less harmful cigarette. Prev. Med., 9: 287-296, 1980

Gori, Gio B.: Priorities in cancer prevention: a conference appraisal. Prev. Med., 9: 305-308, 1980

Gori, Gio B. and Fred G. Boch Eds.: The Banbury Report 3 - A Safe Cigarette? Cold Spring Harbor Laboratory, 1980.

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Lynch, Cornelius J. and Gio B. Gori: Nondetectable risk levels in cigarette smoking. In The Banbury Report, Cold Spring Harbor Laboratory, 1980.

Gori, Gio B.: Less hazardous cigarettes: theory and practice In The Banbury Report, Cold Spring Harbor Laboratory, 1980.

Ritcher, Brian J. and Gio B. Gori: Demographic and economic effects of the prevention of early mortality associated with tobacco related diseases. In The Banbury Report, Cold Spring Harbor Laboratory, 1980.

Gori, G.B. (Ed.): Report No. 4 - Toward Less Hazardous Cigarettes - The Fourth Set of Experimental Cigarettes. National Cancer Institute, 1980.

Battista, S.P., Mione, P., Lappey, A., Gori, G.B.: The role of clotting factors in the etiology of lung disease related to ciliosclerosis. Arch. of Envir. Health, 35: 239-246, 1980.

Gori, G.B.: Cancer prevention through prudent diet. In Nutrition and Food Science, vol. 3. Walter Santos, Nabuco Lopes, J.J. Barbosa, Dagoberto Chaves, and Jose Carlos Valente, Eds. Plenum Press, 1980.

Gori, G.B.: Carcinogens and regulation, letter to the editor. Science, 211: 335, 1981.

Gori, G.B.: The cancer and other connections...if any. Nutrition Today, 16: 14-22, 1981.

Gori, G.B.: The regulation of carcinogenic hazards. In Risk in the Technological Society. C. Hohenemser & J.X. Kasperon, Eds. AAAS symposium volume, 1981.

Gori, G.B.: The uncertain business of testing for cancer. The Wall Street Journal, CXCVIII: 32, 1981.

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Company and Classified Publications:

Senior Author and Project Director in the following:

Concentration and quantitation of viral infectivity in model food samples. Melpar T/A 59128.701, 1965.

Six reports, Moloney Leukemia Virus Program. Melpar 5392.00200 (Ph43-65-1033), 1965-66.

The alteration of the indigenous microflora of the monkey. Melpar T/A 68196.701, 1966.

Four reports, The antitumor activity of characterized bivalve mollusk extracts. Melpar 5498.00100 (Ph43-66-35).

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Franklin Research Center
A Division of The Franklin Institute

20 May 1980

Dr. John F. Krasny
Center for Fire Research
United States Department of Commerce
National Bureau of Standards
Washington, D.C. 20234

Dear Dr. Krasny:

It was indeed a pleasure to meet with you and Dr. Winger last Friday.

The characteristics of reduced cigarette ignition propensity listed in your letter of May 9 were both puzzling and intriguing: Low fuel load seems intuitive, while high burning rate may be not so. -- However, your personal clarifications were much useful, particularly because your immediate objective is the development of a standard method for measuring the potential of different cigarettes, and not the actual measuring itself.

The experimental cigarettes you received from the NCI do not represent commercial products and generalizations from their data may not be justifiable. Moreover, characteristics other than paper porosity will modify combustion rates and temperatures. Significant among them is the level of natural nitrates, which could vary from batch to batch and year to year, thus making it difficult to rank cigarette brands, or even to develop and standardize an analytical procedure.

One of the important findings of the National Cancer Institute's studies on less hazardous cigarettes is that the combustion process of cigarettes affects the physiologic effects of smoke, and that better combustion is likely to result in less hazardous smoke.

Because physiologic effects have greater public health significance than fire hazards of cigarettes, I am of the opinion that any recommendations toward reducing the latter should be thoroughly tested to insure that the former are not adversely affected.

Such tests should include chemical analysis of smoke -- mainstream and sidestream, particulate and gas phase -- and acute and chronic bioassay in tissues and animals.

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1020 Fenwick Lane, Silver Spring, Maryland 20910 (301) 565-4200

EXHIBIT "A"

Of course it will be a pleasure to continue our dialogue if you so desire, and as your studies unfold.

With all good wishes to you and Dr. Winger.

Sincerely,

Gio B. Gori
Dr. Sc., M.P.H.



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